

Post Rock Answers

By Cassie Thiessen April 24, 2025

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Pine Tree Problems

Although pine trees are not native to Kansas, they have been widely planted for ornamental, windbreak, and conservation purposes. However, because they are not adapted to our region's climate, they can face a variety of challenges. Certain varieties, like Scots and white pine, are particularly sensitive to drought. Several pines, including Austrian and ponderosa, are reasonably adapted to Kansas conditions; however, they still can suffer environmental stresses. Unfortunately, pines are also susceptible to several diseases, which can cause defoliation, dieback, and even death. If you have a pine tree that isn't healthy, accurately identifying the problem is important, as control measures are different for each condition.

Tip blight is a fungal disease that affects Austrian, ponderosa, Scots, and mugo pines. The disease is most severe on mature trees (20 years or older). Repeated infections over many years can kill large sections of trees or entire trees. The infection period for tip blight occurs when the buds start to expand, usually in late April. Wet spring weather increases disease severity. Tip blight symptoms first appear in late May or early June. The newly developing shoots (candles) fail to grow. The shoots are stunted, and the emerging needles are stunted and turn yellow or tan.

Dothistroma needle blight is a common and serious disease of Austrian and ponderosa pines in windbreaks and ornamental landscapes. Mugo pine also can be infected, but Scots pine and white pine are considered resistant. The disease causes premature needle drop the year after infection. Austrian and ponderosa pines usually retain needles for 3 to 4 years, so the loss of

interior needles is a loss of important photosynthetic capacity. Repeated infection over many years can kill a tree. The disease tends to be more severe in crowded plantings.

Both tip blight and *Dothistroma* needle blight can be controlled with fungicide sprays. Spring applications will protect foliage from infection. However, follow-up applications will provide a more complete and dependable control. The Post Rock Extension Office offers a publication that outlines recommended fungicides and the optimal times to apply them. You can pick up a copy at your local office or access it online at postrock.ksu.edu.

Pine wilt is a serious problem, caused by the pinewood nematode, a microscopic worm. The pine sawyer beetle, a long-horned borer, spreads the nematode. The nematode feeds and multiplies in the tree's resin canals, quickly causing wilting and death. The nematode and beetles spend the winter in the infected tree. The beetles start emerging around May 1, carrying nematodes to new trees and continuing the cycle of infection.

In Kansas, new pine wilt infections are most apparent from August to December. Trees wilt and die in a short period of time, from several weeks to a few months. The most important step to prevent the spread of pine wilt is sanitation. If a tree is suspected to have pine wilt, bring a sample to your local K-State Research and Extension office for submission to the K-State Plant Disease Diagnostic Lab. A branch that is at least 2 inches in diameter and 6 to 8 inches long, taken from right against the trunk, is adequate. If the test is positive, the tree should be cut down as soon as possible. Cut the tree to the ground — do not leave a stump. Chip or burn the wood immediately to destroy the beetles and nematodes. Do not save the wood for firewood.

The beetles are attracted to drought-stressed trees. If possible, provide water during dry periods to prevent drought stress. There are products available for preventative injections. While they do not provide 100 percent control, several injectable products significantly decreased pine

wilt infection when used preventively in research trials. The materials need to be applied by a trained tree care professional. Injections provide no curative activity. Once a tree is infected, there is no way to stop the disease.

Pine trees are beautiful when healthy, but unfortunately, susceptible to many conditions. If you have questions on how to protect your pine trees, contact your local Post Rock Extension office.

Post Rock Extension District of K-State Research and Extension serves Jewell, Lincoln, Mitchell, Osborne, and Smith counties. Cassie may be contacted at cthiessen@ksu.edu or by calling Beloit (785-738-3597).